

AMENDMENTS TO THE CLAIMS

Please cancel claims 3 and 17 without prejudice or disclaimer, add claims 21-25, and amend claims 1, 2, 4-14, 16, and 18-20 as follows:

1. (Currently Amended) An information display apparatus ~~characterized by~~ comprising:
a pair of main ribs located at ~~[[both]]~~ respective ends of a fan face;~~[[,]]~~
a plurality of intermediate ribs interposed between the main ribs;~~[[,]]~~
a pivot for turnably fixing the main ribs and the intermediate ribs in a root portion;~~[[,]]~~ and
~~[[a]]~~ the fan face joined to the intermediate ribs between the pair of main ribs as well as
openably/closably bent like bellows,

wherein either at least a part of the fan face comprises a thin film flat display formed on a
flexible and bendy thin film, or ~~[[a]]~~ the thin film flat display formed on ~~[[a]]~~ the flexible and bendy
thin film is disposed to at least a part of the fan face, and

wherein said thin film flat display comprises a full color organic EL display capable of
displaying a full color television image, and one of said main ribs comprises a television receiver
circuit.
2. (Currently Amended) An information display apparatus ~~characterized by~~ comprising:
a pair of main ribs located at ~~[[both]]~~ respective ends of a fan face;~~[[,]]~~
a plurality of intermediate ribs interposed by the main ribs;~~[[,]]~~
a pivot for turnably fixing the main ribs and the intermediate ribs in a root portion;~~[[,]]~~ and
~~[[a]]~~ the fan face joined to the intermediate ribs between the pair of main ribs as well as
openably/closably bent like bellows,

wherein, in an unfolded state of the fan face, a thin film flat display formed on a flexible and bendy thin film ~~is made to~~ has a flat surface and is joined to ~~[[the]]~~ vertex portions of mountains of the fan face ~~[[so]]~~ such that the mountains of the fan face are joined in at least a part of the fan face, and

wherein, when the fan face is folded, the thin film flat display is folded to valleys of the fan face along ~~[[it]]~~ the fan face in association with the folding operation.

3. (Canceled).

4. (Currently Amended) An information display apparatus according to claim 1, wherein a ~~keyboard is disposed to a~~ one of the main ribs comprises a keyboard ~~[[rib]]~~.

5. (Currently Amended) An information display apparatus according to claim 1, wherein the intermediate ribs comprise keyboards comprising touch switches ~~are disposed to intermediate ribs~~.

6. (Currently Amended) An information display apparatus according to claim 1, wherein one of the main ribs comprises a computer system for information processing ~~is disposed to the main rib~~.

7. (Currently Amended) An information display apparatus according to claim 1, wherein, to permit outside communication of audio, image, or data, at least one of:

a microphone and a speaker are mounted on one of the main ribs ~~[[rib]]~~,

an antenna is mounted on one of the main ribs ~~[[rib]]~~, and ~~[[or]]~~

one of the [[an]] intermediate ribs [[rib]] is used as [[an]] the antenna ~~to permit communication of audio, image or data to the outside.~~

8. (Currently Amended) An information display apparatus comprising:

a thin film flat display formed on a flexible thin film[[;]], said thin film flat display being a full color organic EL display capable of displaying a full color image;

hold means for holding the thin film flat display from a back surface such that it is joined to front surfaces of a plurality of rigid rectangular substrates when they are arranged on a flat surface;

a case for accommodating the thin film flat display; and

a take-up unit disposed in the case for taking up and accommodating the thin film flat display together with the ~~holding~~ hold means in the case using a direction parallel with [[a]] long [[side]] sides of the ~~substrate~~ rigid rectangular substrates as an axis.

9. (Currently Amended) An information display apparatus according to claim 8, ~~characterized in that a magnet is disposed to~~ wherein at least one of two confronting side walls of adjacent substrates of said rigid rectangular substrates comprises a magnet, and

wherein two of said adjacent substrates are connected by a magnetic force of said magnet such that a flat plane is formed when said thin film flat display is expanded.

10. (Currently Amended) An information display apparatus ~~characterized by~~ comprising:

a thin film flat display formed on a thin film, said thin film comprising at least one of flexible shape memory alloy, shape memory resin, shape memory alloy fiber, and shape memory resin fiber;

a case for accommodating the thin film flat display;

an accommodation unit disposed in the case for accommodating the thin film flat display by taking up or folding it; and

heat means for heating the thin film flat display when it is accommodated or unfolded.

11. (Currently Amended) An information display apparatus according to claim 8, wherein the thin film flat display comprises ~~an organic EL display or~~ an electronic paper.

12. (Currently Amended) An information display apparatus according to claim 8, wherein a ~~keyboard is disposed to the case~~ comprises a keyboard.

13. (Currently Amended) An information display apparatus according to claim 8, wherein a ~~computer system for information processing is disposed to the case~~ comprises a computer system for information processing.

14. (Currently Amended) An information display apparatus according to claim 8, wherein the case accommodates a microphone, a speaker, and an antenna to permit outside communication of audio, image or data ~~to the outside~~.

15. (Previously Presented) An information display apparatus according to claim 1, wherein the thin film comprises at least one of shape memory alloy, shape memory resin, shape memory alloy fiber, and shape memory resin fiber.

16. (Currently Amended) An information display apparatus according to 15, ~~characterized by~~ further comprising means for heating the thin film.

17. (Canceled).

18. (Currently Amended) An information display apparatus according to claim 2, wherein a ~~keyboard is disposed to a~~ one of the main ribs [[rib]] comprises a keyboard.

19. (Currently Amended) An information display apparatus according to claim 2, wherein ~~keyboards comprising touch switches are disposed to~~ the intermediate ribs comprise keyboards comprising touch switches.

20. (Currently Amended) An information display apparatus according to claim 2, wherein a ~~computer system for information processing is disposed to~~ one of the main ribs [[rib]] comprises a computer system for information processing.

21. (New) An information display apparatus comprising:
a pair of main ribs located at respective ends of a fan face;
a plurality of intermediate ribs interposed between the main ribs;
a pivot for turnably fixing the main ribs and the intermediate ribs in a root portions; and
the fan face joined to the intermediate ribs between the pair of main ribs as well as
openably/closably bent like bellows,

wherein either at least a part of the fan face comprises a thin film flat display formed on a flexible and bendy thin film, or the thin film flat display formed on the flexible and bendy thin film is disposed to at least a part of the fan face, and

wherein said thin film flat display comprises a full color organic EL display capable of displaying a full color image, and one of said main ribs comprises a computer system for information processing.

22. (New) An information display apparatus according to claim 8, wherein the thin film comprises at least one of shape memory alloy, shape memory resin, shape memory alloy fiber, and shape memory resin fiber.

23. (New) An information display apparatus according to claim 8, wherein adjacent substrates of said rigid rectangular substrates comprise confronting side walls,

wherein one of said confronting side walls comprises a concave portion,

wherein an other of said confronting side walls comprises a convex portion, and

wherein said convex portion is engaged with said concave portion such that an arc shape is formed in a direction of the take-up unit.

24. (New) An information display apparatus according to claim 22, wherein said take-up unit comprises:

at least three rollers with which the thin film flat display is engaged, at least one of the rollers comprising a turning shaft around which said thin film flat display is taken up and

accommodated, at least two of the rollers guiding said thin film flat display either toward or away from the turning shaft; and

a heater that heats the rollers such that the thin film flat display is softened to change shape while being taken up and accommodated by the turning shaft.

25. (New) An information display apparatus according to claim 22, wherein said take-up unit comprises:

a plurality of fixed and moving rollers with which the thin film flat display is alternately engaged, said fixed and moving rollers being respectively alternately and oppositely disposed in said take-up unit, the thin film flat display being bonded to one of the fixed rollers;

a plurality of springs that urge the moving rollers in an x-axis direction either toward or away from the one of the fixed rollers; and

a heater that heats and softens the thin film of the thin film flat display to allow the thin film flat display to fold to a bellows state using the fixed and moving rollers.